



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,871	04/17/2001	Jeffrey H. Price	PRICE1220-1	8139

7590 12/02/2004
Terrance A. Meador
INCAPLAW
1050 Rosecrans Street
Suite K
San Diego, CA 92106

EXAMINER

YAM, STEPHEN K

ART UNIT	PAPER NUMBER
----------	--------------

2878

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

BEST AVAILABLE COPY



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. Box 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

MAILED

JAN 02 2004

GROUP 2800

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 1203

Application Number: 09/837,871
Filing Date: April 17, 2001
Appellant(s): PRICE, JEFFREY H.

Terrance A. Meador
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 14, 2003.

(1) *Real Party in Interest*

Art Unit: 2878

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1, 2, 4-10, 12, 16, 17, 21-24, and 26.

Claims 3, 11, 13-15, 18-20, 25, and 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

Furthermore, the supplemental amendment submitted on December 11, 2003 was appropriately entered.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

Art Unit: 2878

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-29 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,024,283	Campanelli et al.	12-2000
5,838,538	Litsche et al.	11-1998
6,382,510	Ni	5-2002
6,128,077	Jovin et al.	10-2000
5,485,001	Kusaka	1-1996

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-2, 4-10, 12, 16-17, 21-24, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Campanelli et al. US Patent No. 6,024,283.

Regarding Claims 1, 21, and 24, Campanelli et al. teach (see Fig. 3b) a system and method for imaging of a sample comprising a plurality of detectors (45) each focused at a respective focal plane in a sample volume (43) (see Col. 7, lines 23-27), and light selection optics (42) positioned between the plurality of detectors and the sample volume for transmitting (see Col. 7, lines 10-15) to the detectors a portion of the light originating at the respective focal planes while screening out light originating outside the respective focal planes, where each detector is an area array sensor (each row of detector elements).

Regarding Claims 2, 4 and 8, Campanelli et al. teach the light selection optics as DMD elements (see Col. 7, lines 35-60)- inherently. DMD elements are electrically controlled mirrors that are controllably switched to ON and OFF positions, where each DMD element is individually controlled to adjust the pitch of the mirror, to selectively transmit or block incident light, and that switching between ON and OFF will respectively transmit or block the light to the reading elements (see also Col.8, lines 38-42).

Regarding Claim 5-7, Campanelli et al. teach the patterns controlling (see Col. 7, lines 23-34 and 39-45) a degree of confocality for each detector concurrently in the plurality of detectors (see Col. 7, lines 23-34).

Regarding Claim 9, Campanelli et al. teach each detector focused (see Col. 7, lines 23-26 and 30-34) on a different region of the sample and the light selection optics selects (See Col. 7, lines 30-34) the portion of each region viewed by the detector focused on the region.

Regarding Claim 10, Campanelli et al. teach (see Fig. 3b) focus differentiation optics (42) which causes each detector to be focused at different planes (see Col. 7, lines 30-34) within the sample.

Regarding Claim 12, Campanelli et al. teach (see Fig. 3b) each detector (45) positioned equidistant from the focus differentiation optics (42).

Regarding Claim 16, Campanelli et al. teach (see Fig. 3b) a light source (47) and optics (42) to illuminate the bar code (43) and transfer reflected light to the detectors.

Regarding Claim 17, Campanelli et al. teach (see Fig. 3c) relay optics (38) between the light selection optics (35) and the detectors (36).

Regarding Claim 22, inherently, a detector captures data using time-delay-and-integration methods, with a capacitive element to accumulate and store data over a short delay of time.

Art Unit: 2878

Regarding Claim 23, Campanelli et al. teach a DMD array for focusing- inherently, a focusing mechanism directs light at a specific focal length through the mechanism, while mostly blocking light from other focal lengths, thereby producing a clear image at a specific focal length.

Regarding Claim 26, Campanelli et al. teach (see Fig. 4) providing (see Col. 9, lines 16-22) output from each detector to a processing (140), display (149), and storage (RAM memory within a CPU (140)) system.

(11) Response to Argument

Claims 3, 11, 13-15, 18-20, 25, and 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claims 3 and 15, the invention as claimed, specifically in combination with a light source providing fluorescence, is not disclosed or made obvious by the prior art of record.

Regarding Claims 11, 13, and 14, the invention as claimed, specifically in combination with adjustability for the focus differentiation optics to alter where a detector is focused within the sample, is not disclosed or made obvious by the prior art of record.

Regarding Claim 18, the invention as claimed, specifically in combination with magnification adjustment optics compensating for differences in magnification for each detector, is not disclosed or made obvious by the prior art of record.

Regarding Claims 19 and 25, the invention as claimed, specifically in combination with scanning the sample volume using the detectors, is not disclosed or made obvious by the prior art of record.

Regarding Claims 20, and 27-29, the invention as claimed, specifically in combination with processing three-dimensional images from the outputs of the detectors, is not disclosed or made obvious by the prior art of record.

Regarding Applicant's arguments on the Campanelli reference, Applicant argues that the invention teaches multiple focus distances for each of a plurality of detectors and that Campanelli instead teaches a single focal distance for an entire detector array. Examiner asserts that Campanelli teaches an array 46 of focusing lens which provides a specific focal length individual detector elements in the detector array 45, in order to effectively image an object 43 positioned in a skewed manner with respect to the plane of the detector array (see Col. 7, lines 10-22) and each group of detector elements having an associated predetermined operating focal distance (see Col. 7, lines 22-26). Therefore, Examiner submits that Campanelli teaches "a plurality of detectors which are each focused at a respective focal plane" as recited in the claim language. Examiner also submits that Claim 1 does not recite the plurality of detectors focused at *different* focal planes, which is the basis for Applicant's arguments, but merely that each detector contains an associated focal plane.

Applicant also argues that Campanelli does not teach a "sample volume" and that the symbol at which the detector array is focused in Campanelli is not three-dimensional and hence, is not a "volume". Examiner asserts that Campanelli teaches the bar code attached to a surface of an article (see Col. 1, lines 27-29) and an article is three-dimensional, Campanelli teaches the focusing of the detectors on a sample volume. Furthermore, since Campanelli teaches detecting the symbol when it is skewed with respect to the plane of the detector array (see Col. 7, lines 16-22), the symbol contains a third dimension with the changing distance from the detector array which is relevant to the effective detection of the symbol by the detector array, from providing the array 46 of lenses to provide an individual focal length for specific detector elements in the detector array 45 (see Col. 7, lines 10-16).

For the above reasons, it is believed that the rejections should be sustained.

Application/Control Number: 09/837,871

Page 6

Art Unit: 2878

Respectfully submitted,

SY

SY


December 22, 2003

Conferees

Stephen Yam

Olik Chaudhuri

David Porta


THANH X. LUU
PATENT EXAMINER

TERRANCE A. MEADOR
GRAY CARY WARE & FREIDENRICH, LLP
4365 EXECUTIVE DRIVE
SUITE 1100
SAN DIEGO, CA 92121-2133

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.